Emergency Preparedness:

An Analysis of Staff Knowledge and Training

At Darnall Army Community Hospital

Fort Hood, Texas

Presented by

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May 2006

DISCLOSURE AS CALLED FOR BY ARMY REGULATION 360-1,

SECTION 6-8.C.(2), 15 SEPTEMBER 2000

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STATEMENT OF ETHICAL CONDUCT IN RESEARCH

The author declares no conflicts of interest or financial interests in any product or service

mentioned in this article, including grants, employment, stock holdings, gifts, or honoraria. The

confidentiality of individual members of the study population was protected at all times

throughout the study.

Acknowledgements

Abstract

Currently Army hospitals receive guidance and standards for the establishment and maintenance of an emergency management plan (EMP) from multiple entities, including the United States Army Medical Command (MEDCOM), the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the National Fire Protection Agency (NFPA). These organizations require the establishment of an EMP, yet mechanisms to measure its effectiveness are not provided. JCAHO accreditation is often sited as an indicator of effectiveness, yet it is merely an indicator of compliance with performance measures. Compliance does not tell the hospital or its stakeholders whether or not the staff is adequately trained on the emergency management plans and if they can effectively execute the plan as written. A survey was emailed to staff members to gain a better understanding about the staff's knowledge of the current medical emergency management plan, the type of training they have received on the plan, supervisors' emphasis on the plan, and the type of training the staff would like to receive. Approximately 90 percent of the staff indicated they were in need of additional training and almost 50 percent indicated the most beneficial training would be section level training/drills/exercises that focused on individual section specific responsibilities.

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Introduction

Throughout history no civilization has been immune from disasters. Even with all of the latest advancements in technology, disasters cause a significant amount of damage to the life and health of individuals and communities (Dara, Ashton, Farmer, and Carlton, 2005). According to Dara et al., disaster medical response to natural disasters, warfare, and terrorist acts is a necessary function of any society (2005).

Following the April 19, 1995, bombing of the Murrah Federal Building in Oklahoma City, family members and survivors of the attack created the Oklahoma City National Memorial Institute for the Prevention of Terrorism (MIPT) organization with a goal of working to prevent future terrorist attacks. In 1997, as a result of their actions, Congress enacted Public Law 105-58, The Oklahoma City National Memorial Act, which provided for the formal establishment of MIPT. Dennis J. Reimer, the director of the MIPT stated, "Nothing emerges more clearly from all of the lessons learned in Oklahoma City than the degree to which contingency planning contributes to an effective response" (MIPT, 2002, p. ii).

Six and a half years after the Oklahoma City bombing, the need for community emergency preparedness again became apparent. On the morning of September 11, 2001, two aircraft crashed into the World Trade Center in New York and another aircraft crashed into the Pentagon, in a deliberate attack against the United States. Based on the widespread destruction, extreme loss of life, chaos, and lack of communication among agencies, the United States and its health care organizations began to realize the need to further prepare for a multitude of emergency situations.

St. Vincent's Hospital in New York City is a major level I trauma center located in downtown Manhattan. As the primary recipient of patients following the 1993 bombing of the World Trade Center (WTC) which killed six people and injured 1,000 more, St. Vincent's Hospital found that its "chain of command was not clearly outlined and communications were erratic" (Kirschenbaum, Keene, O'Neill, Westfal, Astiz, 2005, p. 1). Based on this assessment, St. Vincent's Hospital drafted a formal disaster plan that went into effect in 1993 (Kirschenbaum, et al., 2005).

Following the impact of American Airlines Flight 11 into One World Trade Center, St. Vincent's Hospital of New York was able to put its formal disaster plan to a true test. Within minutes of impact, the emergency management external disaster plan was activated. Key to the successful execution of all phases of the plan was the inclusion of the Incident Command System in the revised plan. The command center enhanced communication within the hospital and created a necessary structure and flow of data and ongoing assessments (Kirschenbaum, 2005).

"Since 2001, our nation's leaders . . . and the general public have looked to the health sector for leadership in addressing acts of terrorism. It has become urgent . . . for health professionals to become knowledgeable about disaster preparedness" (Glick, Jerome-D'Emilia, Nolan, Burke, 2004, p. 266). In order for the U.S. to be better prepared for such disasters, it is necessary for entire communities to work together and establish protocols for implementing emergency management procedures. President of the MIPT, Dennis J. Reimer, stated that based on the lesson learned in Oklahoma City, large scale disasters will require the involvement people who do not think of themselves as emergency managers (MIPT, 2002).

Conditions Which Prompted the Study

Darnall Army Community Hospital (DACH) is a 128 bed, Department of Defense medical facility at Fort Hood, located in Central Texas. It operates under the military's health plan, TRICARE, and provides comprehensive health care to approximately 141,000 beneficiaries that include active duty military, family members, and retirees who live within 40 miles of the hospital. DACH is also a partner in the Central Texas Trauma Regional Advisory Council (CTRC), Trauma Service Area-L Hospital Preparedness Planning Group.

As a partner in the CTRAC, DACH not only has to prepare for internal emergencies that affect primarily its own internal assets, DACH must also train and be prepared to assist as part of a larger community of facilities. DACH's current medical emergency management plan (MEMP) was subjected to and passed the JCAHO accreditation survey in November 2004. In July 2005, a new commander assumed command of DACH. Three months later, as Hurricane Katrina rapidly approached the Gulf States and threatened to affect the local Fort Hood area, DACH activated its Medical Emergency Management Plan (MEMP). During the activation and stand-up of the hospital's emergency operation center (EOC) issues regarding staffing of the EOC, communication within the facility, and standard reporting procedures were reported and noted. Primary staff members were not at the facility when the issue of Hurricane Katrina approaching and possibly affecting the Central Texas corridor first arose and staff actions did not seem rehearsed or trained. Valuable staff time was wasted discussing the location for manpower pools. This information was provided in the MEMP, but during the activation of the plan, staff members questioned why those locations were chosen and wanted to change the locations.

Approximately one month later, the Fort Hood in-processing building notified the hospital of a suspicious white powder. Proper actions were taken by the local military police to contain individuals within the area and the hospital staff began preparations to receive and decontaminate affected individuals. Location of the decontamination site and keeping bystanders from contamination by potential chemicals coming off of casualities did not appear to be planned for. Some hospital employees were sent outside to keep people away, and DACH staff placed cones and yellow tape to keep vehicles out of the area. Issues with communication to and from the site of the white powder incident also arose during this incident. All individuals potentially exposed were properly decontaminated and observed for potential issues; the powder was eventually declared non-chemical.

This second activation of the hospital's MEMP, within four months of her taking command, further demonstrated to the commander the need to evaluate Darnall's current level of preparedness. Based on the commander's initial assessment, Darnall's current plan and staff training needed to be emphasized. The commander also wanted to gain an understanding of the training needs for her staff, which led to this project.

Statement of the Problem

By world standards, mass casualty causing events are relatively rare occurrences in the United States (Mothershead, 2001; Kirschenbaum, Keene, O'Neill, Westfal, Astiz, 2005). Prior to September 11, 2001, the most recent mass casualty producing event was the 1928 Florida hurricane, which claimed 2,000 lives (Mothershead, 2001; Kirschenbaum et al., 2005). Including the Florida hurricane of 1928, there had been only six disasters that resulted in more than 1,000 deaths within the United States. While these types of events are relatively rare, disasters are not

uncommon. Mothershead (2001) stated that major disasters occur almost daily around the world and approximately 69% of the people living in the southeastern United States have reported exposure to some traumatic event. Even with those numbers, most people consider large scale disasters an unusual event. Immediately following the September 11, 2001, attacks, Americans were extremely concerned about the nation's level of preparedness and its ability to take care of its people. Since that time, American attention has since moved on and vigilance is being replaced by ambiguity (JCAHO, 2003).

Erick Auf der Heide (1989) discusses two factors that may negatively influence the ability of organizations to prepare for a disaster or an emergency. He calls these two factors the apathy factor and the paper plan syndrome. Apathy is a social reality to be faced in disaster planning. Public apathy towards emergency preparedness is often caused by the lack of awareness, underestimation of the risk of a disaster, a false sense of security provided by current technology, or denial (Auf de Heide, 1989). Not only does the public experience apathy, but the government does as well: "[c]ontributing to the government apathy is the fact that, in spite of increasing threat of disasters, they are still improbable events" (Auf der Heide, 1989, p.19).

According to Worth (as cited by Auf der Heide, 1989), "many hospital administrators concede that while disaster plans are necessary for hospital accreditation, they are relatively unworkable in practice" (p.34). Throughout history, organizations have exercised organizational disaster or emergency management plans only to find that the plans were not followed. Written disaster plans are important, but they can create an illusion of preparedness. In order to prevent this illusion, plans must be based on valid assumptions, be accompanied by training programs, be acceptable to the intended users, and be tied to the necessary resources (Auf der Heide, 1989).

Medical facilities across the U.S. and abroad now have more stringent requirements regarding the establishment and exercising of EMPs in order to comply with JCAHO standards and maintain accreditation. Accreditation, however, does not let an organization know whether its plan will work effectively or whether the staff feels they are adequately trained to execute the plan.

Literature Review

Currently Army hospitals receive guidance and standards for the establishment and maintenance of an emergency management plan (EMP) from multiple entities. These entities include but are not limited to the United States Army Medical Command (MEDCOM), the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the National Fire Protection Agency (NFPA). These organizations require the establishment of an EMP, yet mechanisms to measure the effectiveness of the plan are not provided. JCAHO accreditation is often sited as an indicator of effectiveness; however, accreditation from JCAHO is merely an indicator of compliance with performance measures.

During the JCAHO survey process, areas such as Medication Management (MM), Surveillance, Prevention and Control of Infection (IC), Improving Organization Performance (PI), Leadership (LD), Management of the Environment of Care (EC), Management of Human Resources (HR) Management of Information (IM), Medical Staff (MS), and Nursing (NR) are looked at to determine if a health care facility meets the established standards required to maintain accreditation.

Management of the Environment of Care is the portion of the survey designed to ensure a safe environment for patient care. The EC chapter of the JCAHO Accreditation Manual for Hospitals discusses two standards of particular relevance for emergency preparedness: EC.4.10,

The hospital addresses emergency management, and EC.4.20, The hospital conducts drills

regularly to test emergency management. JCAHO defines an emergency as:

> A natural or manmade event that significantly disrupts the environment of care
>
> (for example, damage to the hospital's building[s] and grounds due to severe
>
> winds, storms, or earthquakes) that significantly disrupts care, treatment, and
>
> services (for example, loss of utilities such as power, water, or telephones due to
>
> floods, civil disturbances, accidents, or emergencies within the hospital or in its
>
> community); or that results in sudden, significantly changed or increased demands
>
> for the hospital's services (for example, bioterrorist attack, building collapse,
>
> plane crash in the hospital's community). Some emergencies are called
>
> "disasters" or "potential injury creating events" (PICEs) (2005, p. GL-7).

JCAHO (2005) defines an EMP as:

> The organization's written document describing the process it would implement
>
> for managing the consequences of natural disasters or other emergencies that
>
> could disrupt the organization's ability to provide care, treatment, and services.
>
> The plan identifies specific procedures that describe mitigation, preparedness,
>
> response, and recovery strategies, action, and responsibilities (p. GL-7).

Standards EC.4.10 (Appendix A) and EC.4.20 (Appendix B), both have their own

elements of performance, which are the "expectations and/or structures or processes that must be

in place in order for a hospital to provide safe, high-quality care, treatment, and services"

(JCAHO, 2004, p. EC-5). These performance measures are scored based on an organization's

compliance utilizing the following scale: 0 = insufficient compliance, 1 = partial compliance, 2 = satisfactory compliance and NA = not applicable (JCAHO, 2004).

Some standards have elements of performance that JCAHO has identified as key measures of success. According to JCAHO, 2004, a measure of success is defined as "a quantifiable measure . . . that can be used to determine whether an action has been effective and is being sustained" (p. EC-5). Currently, none of the elements of performance listed in EC 4.10 or EC 4.20 are identified as measures of success. Therefore, compliance with these elements of performance does not mean that an organization has an effective plan, according to JCAHO standards. Compliance with the elements of performance simply identifies an EMP that meets the required measures of performance.

JCAHO is not the only regulatory agency from which Army hospitals receive guidance and standards for the establishment and maintenance of an emergency management plan. MEDCOM Regulation 525-4 specifically applies to all elements of MEDCOM and its U.S. Army Reserve WARTRACE aligned units. The overall objective of the regulation is to facilitate the emergency management planning process and provide a source for policies and procedures relating to different disasters or emergencies. MEDCOM aims to support the Federal Response Plan, specifically; the Emergency Response Function #8, and the National Disaster Medial System. The national Disaster Medical System describes the roles of the differing Army medical assets (MEDCOM, 2000). The responsibilities of the Commanders of MEDCOM installations, MEDCENs, MEDDACs, and stand-alone clinics discussed in MEDCOM Regulation 525-4 closely represent the requirements established by both the Joint Commission and the NFPA.

Recurring themes of what a hospital should include in its emergency preparations and plans include the establishment of an emergency preparedness committee, an initial assessment of the potential hazards facing a particular facility (hazard vulnerability analysis), development an actual plan, implementation of an incident command system, education and training of hospital staff on their roles during an emergency, and conduct of exercises/drills and evaluations of the actual emergency plan.

MEDCOM Regulation 525-4 states that commanders are to prepare an EMP using the guidance provided. Hospital commanders must also establish a committee charged with overseeing the Emergency Management Program. The committee must be made up of principle staff or representatives empowered to make decisions and must also have representatives from both the clinical and administrative sides of the organization (MEDCOM, 2000). JCAHO standard EC.4.10 requires that at a minimum, the plan be developed with the involvement of medical staff and hospital leadership (2005). In section11-4.2, the NFPA indicates it is the "...responsibility of senior management to provide its staff with plans necessary to respond to a disaster or emergency" (Gardner, 1999, p. 496). NFPA does not mandate who should be part of the EMP committee, only that senior management is to appoint a committee and provide authority in writing. This committee is to write, implement, exercise and evaluate the hospital's EMP (Gardner, 1999).

To assist with the development of a more effective emergency management plan, JCAHO standard EC.4.10 requires an emergency plan address the following four phases of emergency management: mitigation, preparedness, response, and recovery (JCAHO 2005, JCAHO, 2003). In

the 2002 revision of NFPA 99, emergency management is discussed utilizing these same four

phases.

Mitigation activities are "those activities a hospital undertakes in attempting to lessen the

severity and impact of a potential emergency" (JCAHO, 2005, p. EC-13). Prior to creating a plan,

an organization has to know what types of emergencies for which it needs to prepare. To be

prepared for every emergency is unrealistic; however an organization should identify what the

most likely disasters are and prepare a plan based on that assessment. JCAHO calls this process

the hazard vulnerability assessment (JCAHO, 2003). Similarly, in section 11-5, NFPA dictates

that planning be based on the reality and probability of events based on the location of the facility

in relation to potential disasters (Gardner, 1999). By conducting a hazard vulnerability

assessment, organizations are better able to prepare to mitigate the effects of potential hazards.

Mitigation activities may include such things as arranging for back up generators, fire

suppression/ smoke detection systems, building flood walls, etc. What activities an organization

chooses to do should be based on its location, past history of disasters, and likelihood of future

disasters (JACHO, 2003, June).

Preparedness activities are defined as "those activities a hospital undertakes to build

capacity and identify resources that may be used in the event of an emergency" (JCAHO, 2005,

p. EC-13). Examples of preparedness activities include the development of the emergency plan,

training of the staff, creation of recall rosters, negotiated mutual aid agreements, and

arrangements with suppliers for preferential service in the event of an emergency (EOC, 2004).

Staff education is critical to the successful implementation of the emergency plan. The NFPA

recommends that each staff member attend an educational session explaining the overall scope of

the hospital's plan. Following that training, personnel should receive department specific training which provides specific information pertaining to the individual staff members responsibilities during an emergency (Gardner, 1999).

In the aftermath of September 11, 2001, the Greater New York Hospital Association (GNYHA) created the Emergency Preparedness Coordinating Council (EPCC), which was designed to help bring together those agencies that would work together in the event of an emergency. Some of the agencies include "state, local, and federal public health officials and emergency management agencies" (GNYHA, 2005, p. i). The creation of such organizations lends itself to community preparedness and the establishment of responsible entities thus enhancing emergency preparedness.

Following the preparedness phase comes the response phase, which is the actual carrying out of the plan. Key to the success of this phase is that the response is "always based on training" (EOC News, Nov 2004, p. 11). Some examples of response include establishment of the command system, triage locations, activation of call in procedures to obtain additional staff, and actual switching to alternate utility source (EOC News, 2004). These activities may be best exercised utilizing drills. The NFPA, MEDCOM, and JCAHO currently require that accredited facilities conduct exercises/drills of its emergency preparedness plans at least twice per year (Gardner, 1999; JCAHO, 2005; MEDCOM, 2000). MEDCOM further mandates that an after action review be prepared and submitted to the regional medical command (RMC) within 30 days of an emergency incident or exercise (2000).

According to Gardner, "The drill should seek to evaluate the staff's knowledge and understanding of the present emergency preparedness procedures. In this way, the effectiveness of

the procedure can be evaluated" (1999, p. 816). Gardner goes on to state that often staff have received emergency preparedness training during orientation and in-service programs, but it is not until the facility conducts an actual drill that the staff gets to conduct hands-on training (1999). Investigations of health care fires and other types of disasters indicate staff react much more appropriately if they have had a chance to actually carry out procedures rather than if they had only watched a video or read a training manual (Gardner, 1999).

The final phase of emergency management is the recovery phase. These are the actions that an organization will take to get itself back to pre-disaster conditions. The *Environment of Care News* provides the following examples of recovery: the reorganization of the emergency department, the maintenance of good financial records to ensure your organization gets reimbursed for expenses incurred during the disaster, assistance of staff members experiencing stress related to the incident, and finally, a careful analysis of the events that took place (strengths and areas needing improvement), which will allow the organization to make adjustments to the current plan and improve its effectiveness for the next emergency.

Despite the prominence of emergency management and emergency preparedness in society today, a thorough literature review showed a lack of universal measures of effectiveness for emergency preparedness plans. What was discovered, however, was a multitude of instruments and recommendations that an organization may utilize for the development and implementation of an emergency management plan.

Purpose

The purpose of this study was to present a meaningful analysis of current staff perceptions and knowledge regarding the emergency preparedness training received at DACH.

Analyzing this information will provide hospital leadership with an understanding of the staff's current state of preparedness. Hospital leadership may also utilize the information to tailor future emergency preparedness training which addresses the issues and preferences notated by the staff that are required to execute the MEMP. In addressing these issues, Darnall will not only have a plan that meets regulatory and accreditation requirements, it will have a more competent staff and a more effective plan.

<center>Methods and Procedures</center>

This study was designed to obtain descriptive baseline data to identify current emergency preparedness training trends and needs at DACH.

Sampling Design

The study sample was derived from a total hospital staffing population of N= 2,883 employees. This information was pulled on 2 December 2005 from the Medical Education and Personnel System (MEPS) located on DACH's intranet. For the purpose of this study, a random sample of approximately 15 % of the total employees (n = 450) was selected to participate in the survey. To create a random sample, the MEPS data was imported into an Excel database that comes standard with Microsoft Office 2003. Utilizing the sampling and random functions found in the Excel tools/ data analysis section, a random selection of 450 numbers was generated from the list provided. These numbers identified the individuals from within the population to be surveyed.

The random sample distribution is presented in Table 1. For the purpose of this study, Officers were defined as both active duty and activated reserve and National Guard officers.

Enlisted included active duty, reserve, and National Guard enlisted soldiers. Students were comprised of medical students and residents who were conducting rotations within DACH.

Table 1

Survey Distribution Based on Random Sampling of Hospital Population

	Survey Distribution	Percent
Officers	61	13
Enlisted	80	18
General Schedule	147	33
Wage Grade	12	3
Contract	129	29
Student	10	2
Volunteer	11	2
	n = 450	% Total = 100

Survey instrument

The survey instrument was a self-administered questionnaire, developed specifically for the purpose of addressing the objectives of this study. The survey consisted of 17 questions. The questions provided multiple-choice, dichotomous, and scaled options as possible answers. The first two questions of the survey pertained to general demographic characteristics associated with working in an Army medical treatment facility.

The next three questions were used to determine if the individuals being surveyed were aware of the hospital's plan, the section plan, and weather or not they had ever read a portion of the plan. These questions are coded "1" if yes and "0" if no. Similar to these two questions, question five asked the staff member if their individual section has a section specific plan. The response to this question was coded "1" if yes, "2" if no, and "3" if don't know.

Questions six was designed to determine whether or not the individual being surveyed had a position designated in the Hospital Emergency Incident Command System (HEICS) or if they are even aware of HEICS. Question seven was investigative in nature, focusing on documentation of emergency preparedness skills in competency based orientation assessment folders. Responses to both questions were coded "1" if yes, "2" if no, and "3" if don't know.

Questions eight through ten of the survey were investigative in nature, centering on the actions and emphasis placed on Darnall's MEMP. The questions asked about the amount of emphasis placed on the MEMP by immediate supervisors, supervisors' efforts to teach MEMP responsibilities to new employees, and counseling individuals on their responsibilities as they relate to the MEMP. Question eight was coded "0" if none, "1" if low degree, "2" if moderate degree, and "3" if high degree. Question nine was coded "0" if none, "1" if little emphasis, "2" if moderate emphasis, "3" if great emphasis, and "4" if don't know. Question ten was coded, "1" if yes, "2" if no, and "3" if don't know.

Questions eleven and twelve were targeted research questions focusing on the amount and frequency of training DACH staff received on the medical emergency management plan. Question eleven asked how much training they had received in the last twelve months, ranging from zero to four or more hours of training. Responses were coded "0" if none, "1" if 0-2 hours, "2" if 2-4 hours, and "3" if four or more hours. Question twelve specifically asked how long it has been since they last received training. Responses were coded as "1" if 0-30 days, "2" if 31-60 days, "3" if 61-90 days, "4" if 91-120 days, and "5" if greater than 120 days

Questions thirteen through fifteen were designed to describe what types of training was received, how the individual learns best, and what method of training the staff members feel

would be most beneficial to assist with learning their responsibilities in the MEMP. The responses for all three questions were coded "1" if selected and "0" otherwise.

Question Sixteen was a self evaluation of training question. Staff members were asked to describe their personal training needs as they relate to their ability to perform their role in the event of an emergency. The choices ranged from don't need training to need training right now. The answers were coded "1" don't need training, "2" Need a little training, "3" Need some training, "4" Need significant training, and "5" Need training right now.

The final question was designed to test the staff's knowledge of the basic color codes utilized at DACH as part of its MEMP. All staff members are expected to know and respond appropriately to these codes when required. The codes include: Code Red, "fire"; Code Blue, "cardiac arrest"; Code Orange, "chemical"; Code Pink, "infant abduction"; and Code Yellow, "bomb". This question was designed as a multiple choice test question. The staff was provided the five color codes utilized within DACH and asked to match them with one of the appropriate six possible answers. The answers were coded "0" Show of force, "1" Infant/child abduction, "2" Cardiac arrest, "3" Chemical, "4" Fire, and "5" Bomb. Frequencies were run for each code individually.

The randomly selected participants were notified via email of their selection to participate in the survey. The email included a cover letter signed by the hospital commander inviting them to help shape our team (Appendix C), instructions for completing the survey, a link to the actual survey (Appendix D), and a point of contact should they have any difficulties getting the link to work. Individuals without an email account were provided a paper copy of the Commander's letter, the survey, an addressed distribution envelope, and instructions for returning the survey.

Survey Reliability and Validity

The survey instrument was constructed specifically for this study. Portions of the survey were modeled after Department of Defense (DOD) and American Hospital Association (AHA) surveys on chemical and bioterrorism preparedness. Currently there is no literature to indicate a consistent level of reliability for this survey instrument.

Content validity of the survey was obtained by consulting with experts in the fields of healthcare administration, nursing services, clinical services, hospital readiness, education, training, and security. Expert reviewers affirmed the validity of the instrument, indicating the survey instrument was reflective of its intended content.

The instrument was also pilot tested for face validity prior to administration. A random sample of twenty Darnall staff members was utilized to evaluate the clarity of the instrument. Based on the comments provided by the pilot study group, identified survey questions were modified to clarify misunderstandings and to ensure more accurate responses during the actual survey.

Ethical Considerations

The confidentiality of individual members of the study population was protected at all times throughout the study. Careful consideration was made to safeguard the identity of the respondents to minimize the chance of repercussions and to encourage maximum participation. No patient information was required for this survey. No inducement for participation was made or offered. Study participation was voluntary with the understanding that the survey offered the participants a chance to share their experiences and perceptions of emergency preparedness training currently taking place at DACH and provide input for future training.

Data Analysis

The Statistical Package for Social Sciences (SPSS) version 12.0 for Windows was utilized to analyze all quantitative data. Descriptive statistics expressed as frequencies and percents was used to summarize the data collected from questions one through seventeen. The results were reported in tables as numbered totals and frequency percentages.

Results

The results of the survey distribution response rates are presented in table 2. Four hundred and fifty individuals from throughout the Fort Hood health system were selected to participate in the survey. Participants worked within the Darnall military treatment facility, six outlying health clinics, community health, occupational health, refill pharmacy, preventive medicine, social work services, psychology, substance abuse rehabilitation, blood donor center pediatric clinic, and satellite administrative locations. Out of the 450 surveys distributed, a total of 167 surveys (37 percent) were completed and returned. Fifty two individuals selected to participate in the survey (12 percent) did not have a current outlook mail account. Of the 52 individuals identified without an outlook account, forty three (10 percent) were no longer working within the Darnall health system. The remaining nine individuals, without outlook accounts, were provided paper copies of the survey along with an addressed distribution envelope to allow for confidentiality.

Out of 167 surveys that were returned, General Schedule (GS) employees made up the largest percentage of respondents at thirty eight percent and had a forty three percent return rate. Officers had the greatest response rate with sixty two percent of the surveyed officers responding, constituting approximately twenty three percent of the total respondents. Sixty three surveys were

filled out by GS employees, giving them a forty three percent response rate representing thirty

eight percent of the respondents. Contract employees represented twenty four percent of the total

followed by officers with twenty three percent, and enlisted members with nine percent. Wage

Grade employee respondents made up four percent of the total respondents. Finally, students and

volunteer respondents each represented one percent of the total.

Table 2

Survey Distribution Response Rates

	Survey Distribution	Percent	Survey Response	Percent total	Return Rate
Officers	61	13	38	23	.62
Enlisted	80	18	15	9	.19
General Schedule	147	33	63	38	.43
Wage Grade	12	3	7	4	.58
Contract	129	29	40	24	.31
Student	10	2	2	1	.20
Volunteer	11	2	2	1	.18
	n = 450	% Total=100	n = 167	% Total = 100	

Table 3 summarizes the demographic characteristics of the 167 returned surveys. Based

on the pay grade structure or categorization, a total of 70 respondents were civilian GS or wage

grade employees (42 percent), 53 were military (29 percent), 40 were contract employees (24

percent), and 4 were categorized as other (2 percent). The most frequently reported military pay

grade was O4 through O6 at 13 percent. The O1 through O3 followed with 10 percent. The

most frequently reported civilian pay grade was GS1 through GS5 with 14 percent, followed by

the GS5 through GS9 with 13 percent.

Twenty three percent of the respondents reported their primary duty as "other", indicating their primary function was not listed as a possible choice on the survey. Sixteen percent of the respondents indicated their primary function was that of an administrative assistant, clerk, or secretary. More than one third of the respondents reported their primary function as administration/management, nursing, or physician/physician in training (13 percent, 13 percent, and 11 percent, respectively).

The typical respondents, based on highest frequencies fall into three different categories: GS employee, contract civilian or military officer (37 percent, 24 percent, and 23 percent, respectively). Based on the highest frequencies, the typical respondents' duties are those of an administrative assistant, registered nurse, or administration/management (16 percent, 13 percent, and 13 percent, respectively).

Table 3

Sample Demographic Characteristics

Question Number[a]		Number	Percentage
1. Pay Grade:	01-03	17	10.2
	04-06	21	12.6
	E1-E4	2	1.2
	E5-E6	8	4.8
	E7-E9	5	3.0
	GS1-GS5	24	14.4
	GS6-GS9	22	13.2
	GS10-GS13>	17	10.2
	Wage Grade	7	4.2
	Contract Civilian	40	24.0
	Other	4	2.4

Table 3 (continued) *Sample Demographic characteristics*

Question Number[a]		Number	Percentage
2. Primary Function:	Attending/Staff physician	15	9.0
	Res Phys/ Phys in trng	3	1.8
	Registered Nurse	21	12.6
	LVN/LPN	7	4.2
	Pt Care Asst/Aide/ Care Partner	10	6.0
	Pharmacist	4	2.4
	Dietician	1	.6
	Admin Asst/ Clerk/Secretary	26	15.6
	Respiratory Therapist	2	1.2
	Physical, Occupational, or Speech Therapist	3	1.8
	Technician (e.g., EKG, Lab, Radiology, Pharmacy)	12	7.2
	Admin/ Management	21	12.6
	Maint/ Housekeeping	2	1.2
	Volunteer	2	1.2
	Other	38	22.8

[a] Survey items in this table are an abbreviated form of the questions contained in the survey.

Table 4 summarizes the MEMP awareness characteristics of the respondents. Over seventy percent of the respondents indicated they know where to find a copy of the hospital's MEMP. Approximately sixty two percent indicated they have read at least some portion of the hospital's plan.

Forty seven percent of the respondents indicated their section does have a section specific plan, while approximately fifty three percent indicated their section either didn't have a specific plan or they were not aware of one.

Table 4

MEMP Awareness Characteristics

Question Number[a]		Number	Percentage
3. Knowledge of location of MEMP:	Yes	120	71.9
	No	47	28.1
4. Have read portion of MEMP:	Yes	104	62.3
	No	63	37.7
5. Section has a separate plan:	Yes	78	46.7
	No	29	17.4
	Don't Know	60	35.9

[a] Survey items in this table are an abbreviated form of the questions contained in the survey.

As shown in table 5, fifty five percent of the respondents reported not having a designated position in the hospital's emergency incident command system. Twenty seven percent of respondents reported they didn't know if they held a position in HEICS, while 18 percent reported they did have a specific role in HEICS.

Table 5

HEICS Responsibility

Question Number[a]		Number	Percentage
6. Specified Position in DACH HEICS:	Yes	30	18
	No	92	55.1
	Don't Know	45	26.9

[a] Survey items in this table are an abbreviated form of the questions contained in the survey.

Table 6 summarizes the respondents' perceptions of emphasis placed on the MEMP by their supervisors. Sixty percent of respondents believe their supervisors place a moderate to high degree of emphasis on the MEMP, while the remaining forty percent believe supervisor place little to no emphasis on the MEMP. When it comes to teaching new staff members their responsibilities as they relate to the MEMP, forty four percent of respondents indicated their supervisors placed little emphasis (22 percent) to moderate emphasis (22 percent) on teaching new staff. Twenty nine respondents indicated they didn't know how much emphasis was placed on teaching new staff members their responsibilities as they relate to the MEMP.

The competency based orientation assessment folders are utilized as a mechanism to track an individuals training and competency prior to and during assignment to a specific work area. Approximately forty seven percent of the respondents don't know if emergency management skills and knowledge are included in their CBO assessment folders. Twenty percent of respondents indicated those skills and knowledge areas are not included in their CBO, while thirty four percent indicated they were part of their CBO. Fifty two percent of the respondents reported they had not been counseled on their responsibilities as they relate to the hospital's MEMP.

Table 6

Characteristics of Supervisor Emphasis on MEMP

Question Number[a]		Number	Percentage
7. Are Emergency management skills included in CBO:	Yes	56	33.5
	No	33	19.8
	Don't Know	78	46.7

Table 6 (continued)   *Characteristics of Supervisor Emphasis on MEMP*

Question Number[a]		Number	Percentage
8. Immediate supervisor emphasis on MEMP:	None	27	16.2
	Little Emphasis	40	24.0
	Moderate Emphasis	59	35.3
	Great Emphasis	41	24.6
9. Emphasis on teaching MEMP to new section staff members:	None	21	12.6
	Little Emphasis	36	21.6
	Moderate Emphasis	36	21.6
	Great Emphasis	25	15.0
	Don't Know	49	29.3
10. Counseled regarding MEMP:	Yes	59	35.3
	No	87	52.1
	Don't Know	21	12.6

[a] Survey items in this table are an abbreviated form of the questions contained in the survey.

Table 7 summarizes the amount of training the respondents received, the frequency in which they received training, and how the training was provided to them. Within the last twelve months, forty six percent of the respondents reported receiving between zero and two hours of training on the MEMP. Twenty three percent of respondents reported receiving no training on the MEMP. Twenty percent reported receiving two to four hours of training and eleven percent reported receiving more than four hours of training over the last twelve months.

Thirty eight percent of the respondents indicated they had not received training on the MEMP in over 120 days. Twenty three percent indicated they had received training in the last 30

days. The remaining training frequencies received an almost equal distribution: 31 – 60 days, 14

percent; 61-90 days, 16 percent; and 91 – 120 days, 14 percent.

Online self-paced learning is the primary means by which respondents have received

training on the MEMP (38 percent). The other primary sources of training for the MEMP are:

scheduled drills and exercises (31 percent), section/staff meetings and discussions (28 percent),

and hospital orientation and section orientation (26 percent).

Table 7

MEMP Training Characteristics

Question Number[a]		Number	Percentage
11. Training on MEMP in last 12 months:	None	39	23.4
	0-2 hours	76	45.5
	2- 4 hours	34	20.4
	4 or more hours	18	10.8
12. How long since last MEMP training:	0 – 30 days	32	19.2
	31 – 60 days	23	13.8
	61 – 90 days	26	15.6
	91 – 120 days	23	13.8
	Greater than 120 days	63	37.7
13. Type of training received:	Power Point / Lecture	33	19.8
	Online self paced learning	64	38.3
	Hospital orientation only	20	12.0
	Hosp and Section Orientation	44	26.3
	Scheduled drills/exercises	51	30.5
	Random occurrences which cause activation of MEMP	39	23.4
	Sect/Staff mtgs and discuss	46	27.5
	Other	25	15.0

[a] Survey items in this table are an abbreviated form of the questions contained in the survey.

Table 8 summarizes the training preferences and needs of the respondents. When asked, "What training mechanism(s) do you find the most beneficial for learning about emergency management," forty eight percent of the respondents indicated that scheduled drills and exercises would be most beneficial way for them to learn about the MEMP. Following scheduled drills and exercises; online self-paced learning with forty three percent, and section/staff meetings and discussions with forty percent, were the next two most beneficial ways respondents felt they could learn about emergency management.

Forty seven percent of respondents indicated that section level training/drills/exercises focusing on section responsibilities would be the most beneficial way for them to learn their responsibilities as they relate to the MEMP. Twenty five percent indicated they would learn their responsibilities best with computer based training. Additionally, twenty three percent indicated they would learn their responsibilities best in hospital size drills/exercises utilizing real people acting as patients. Less than one percent of the respondents indicated large group lectures as the best way to learn their role in the MEMP and only four percent indicated hospital size drills and exercises utilizing casualty cards as patients would be the most beneficial training.

Approximately ninety nine percent of the respondents indicated they needed additional training, leaving just over one percent that indicated they did not need additional training in order to perform their duties as designated in the MEMP. The majority of the respondents (forty three percent) indicated that they needed "some training", which was the mid-point of five possible choices, ranging from "don't need training" to "need training right now". On the far extreme of

the scale, five percent of the respondents indicated they needed training right now in order to

perform the MEMP duties.

Table 8

MEMP Training Preference/Need Characteristics

Question Number[a]		Number	Percentage
14. Training mechanism most beneficial:	Power Point / Lecture	44	26.3
	Online self paced learning	72	43.1
	Scheduled drills/exercises	80	47.9
	Random occurrences which cause activation of MEMP	41	24.6
	Sect/Staff mtgs and discussion	67	40.1
	Reading articles	21	12.6
	Other	11	6.6
15. Training most beneficial to learn MEMP:	Sect level training/ drills/ exercises focusing on section responsibilities	79	47.3
	Computer based training	42	25.1
	Large group lectures	1	.6
	Hospital size drills with real people acting as patients	39	23.4
	Hospital size drills/exercises with notional (paper) patients	6	3.6
16. Current training needs to perform MEMP duties:	Don't need training	19	1.4
	Need a little training	49	29.3
	Need some training	71	42.5
	Need significant training	19	11.4
	Need training right now	9	5.4

[a] Survey items in this table are an abbreviated form of the questions contained in the survey.

Table 9 summarizes the respondents' knowledge of the current MEMP codes utilized at DACH. The codes are part of the MEMP and all staff members are expected to know and respond to them, when the code is announced. Ninety eight percent of the staff correctly identified code pink as the infant abduction notification. Ninety six percent of the staff knew that code blue indicates a cardiac arrest and ninety three percent of the staff knew that code red indicates a fire in a certain area. Only fifty six percent of the staff was aware that code orange is used for chemical attacks and fifty five percent correctly answered code yellow as the bomb threat. Twenty two percent of the staff members who did not answer code orange correctly had chosen the code yellow answer, "bomb". Thirty four percent of the respondents who incorrectly answered the code yellow incorrectly had chosen the code orange answer, "chemical".

Table 9

MEMP Code Knowledge

Codes	Number	Percent Correct
Blue	160	95.8
Orange	93	55.7
Red	155	92.8
Yellow	91	54.5
Pink	163	97.6

[a] Survey items in this table are an abbreviated for of the questions contained in the survey.

Discussion

The results of this study indicate that overall, the respondents need at least some additional training in order to better perform their roles as indicated in the hospital's MEMP. The three codes that are most often practiced within the organization (codes red, blue, and pink), are well know by greater than ninety five percent of the staff, even those who work outside of the main hospital building, while codes yellow and orange are not so well known. These findings are consistent with the expectations of the author.

While conducting the research, it was discovered that DACH has the provisions for a multidisciplinary team to provide oversight to its MEMP spelled out in MEDDAC Regulation 15-1. MEDDAC Regulation 15-1, Table 2 Standing Meetings (Appendix E) shows that an Emergency Preparedness Planning meeting group has been established at DACH. This meeting is to be chaired by the Deputy Commander for Clinical Services (DCCS) and it is to report to the Environment of Care Committee and the Executive Committee (MEDDAC, 2004). Furthermore, it was discovered that the emergency preparedness planning meetings are only required to meet ad hoc (MEDDAC, 2004). Based on discussions with staff members, it appears that meetings for emergency preparedness are seen more as a hindrance to the provision of health care rather than as an enhancement to preparedness. Rather than a multidisciplinary approach to emergency preparedness, the staff members within the Divisions of Readiness, Education, Training and Security (DRETS) have assumed all responsibilities for emergency preparedness planning and exercises. This appears to not only be in violation of JCAHO standards, it also appears to violate MEDCOM policy.

One of the limitations associated with this study is the sample population. For this study, a sample was drawn from the entire Darnall health system, to include all of the outlying clinics and administrative buildings. Some of these areas do not play a direct role in the immediate activation or execution of the hospital's MEMP. Future studies may wish to focus specifically on the hospital and clinic staff only, as they are most immediately affected by the activation of the MEMP. Also, the enlisted personnel response rate was only eighteen percent which may not provide an adequate sample to make assumptions about the enlisted training received. Additionally, the database from which the sample population was draw was not current enough to provide an accurate population thus causing a great deal of time was spent trying to locate the individuals listed in the database and not on outlook.

The survey instrument utilized for this study could be modified to address facility specific needs or questions regarding staff training and knowledge. Question six asked staff members about their role in the HEICS. Upon competition of the survey, it was determined that there was not much utility in this question. Future studies may choose to focus on those individuals who are identified as having a role in HEICS and surveying them separately to more specifically assess their training readiness and needs.

Conclusion and Recommendations

The purpose of this study was to analyze the emergency preparedness knowledge and training needs of the individuals currently working within the Darnall health system. The information gathered will allow the command to provide emergency preparedness training that addresses both the training needs, and the preferred learning styles identified by the staff that executes the hospital's MEMP. In order to assess the staff's knowledge and training needs, this

study focused on different areas which included: MEMP awareness, supervisor emphasis on MEMP, MEMP training characteristics, training preferences and needs, and finally MEMP Code knowledge.

As the results indicate, section level training on specific emergency preparedness roles and responsibilities should be the initial focus of the organizations training efforts regarding MEMP. To coincide with that, the results also indicate that leaders need to place greater emphasis on the training and importance of each individual in the MEMP.

The results also indicate that Darnall Army Community Hospital staff could further improve its overall preparedness for emergencies by focusing on the utilization of hospital sized drills and exercises, with real people acting as patients. The utilization of real people during training exercises will help develop staff confidence and provide staff with a more realistic experience of the confusion associated with an emergency situation. Local family readiness groups may be asked to participate and provide individuals to serve as casualties. This would allow maximum staff participation and it provides an opportunity to demonstrate the hospitals preparedness to its beneficiaries.

Not all training needs to be done as a group. Online self-paced learning was identified as the second most beneficial method to learn about the MEMP. As such, online courses could be developed that enhance the staffs understanding of basic information such as: actions during specific codes, reporting procedures during the activation of the MEMP, manpower pool locations, and emergency operations center (EOC) report requirements just to name a few. Annual training and everyday availability of this information will enhance training opportunities at both the section and hospital levels.

According to this study, approximately ninety nine percent of the staff indicated they are in need additional training. In order for the staff at DACH to more effectively execute the current emergency management plan, it is imperative that the staff be provided realistic training at the section, department, and hospital levels.

One recommendation from the study results is that DACH reinvigorate its emergency preparedness planning meetings. Update MEDDAC Regulation 15-1, Tab B-5 of the regulation (Appendix F), by changing the meeting frequency from "ad hoc" (MEDDAC, p. 80, 2004), to monthly. Maintain the current multidisciplinary membership for the meeting group as established (Appendix F). The primary functions of the group could be enhanced and reflect the needs of the command by adding the following functions: assist sections with the creation of realistic training ensuring section training corresponds with the hospital plan, assess section level training, develop an annual training cycle/guidance, and conduct after action reviews following training and exercises to ensure the hospital plan correctly depicts what is expected to happen in the event of an activation of the plan.

As Eric Auf der Heide inferred, health care organizations must overcome the apathy towards emergency preparedness, in spite of the improbability of disastrous events (1989). Scheduling emergency preparedness exercises comes at a cost. It will temporarily reduce patient access to care and may affect patient satisfaction. But, in the event of an actual emergency, the hospital will experience an immeasurable return on its investment.

Appendix A

Rational for EC.4.10. An emergency in the hospital or its community could suddenly and significantly affect the need for the hospital's services or its ability to provide those services. Therefore, a hospital needs to have an emergency management plan that comprehensively describes its approach to emergencies in the hospital or in its community.	Scoring Grid 0 Insufficient compliance 1 Partial compliance 2 Satisfactory compliance NA Not applicable
Elements of Performance for EC.4.10. 1. The hospital conducts a hazard vulnerability analysis* to identify potential emergencies that could affect the need for its services or its ability to provide those services.	A 0 1 2 NA

2. The hospital establishes the following with the community:
  • Priorities among the potential emergencies identifies in the hazard vulnerability analysis
  • The hospital's role in relation to a community-wide emergency management program
    • An "all-hazards" command structure with the hospital that links with the community's command structure
	A 0 1 2 NA

3. The hospital develops and maintains a written emergency management plan describing the process for disaster readiness and emergency management, and implements it when appropriate.	B 0 1 2 NA
4. At a minimum, an emergency management plan is developed with the involvement of the hospital's leaders including those of the medical staff.	A 0 1 2 NA
5. The plan identifies specific procedures that describe mitigation**, preparedness***, response, and recovery strategies, action, and responsibilities for each priority emergency.	B 0 1 2 NA
6. The plan provides processes for initiating the response and recovery phases of the plan, including a description of how, when, and by whom the phases are to activated.	B 0 1 2 NA
7. The plan provides processes for notifying staff when emergency response measures are initiated.	B 0 1 2 NA
8. The plan provides processes for notifying external authorities of emergencies, including possible community emergencies identified by hospital (for example, evidence of a possible bioterrorist attack).	B 0 1 2 NA
9. The plan provides processes for identifying and assigning staff to cover all essential staff functions under emergency conditions.	B 0 1 2 NA

10.	The plan provides processes for managing the following under emergency conditions:
	    • Activities related to care, treatment, and services (for example, scheduling, modifying, or discontinuing services; controlling information about patients;
	     referrals; transporting patients)
	    • Staff support activities (for example, housing transportation, incident stress debriefing)
	    • Staff family support activities
	    • Logistics relating to critical supplies (for example, pharmaceuticals, supplies,
	     food, linen, water)
	    • Security (for example, access crowd control, traffic control)
	    • Communication with news media
	    • Communication with patients
		B 0 1 2 NA

11.	Not applicable	B 0 1 2 NA
12.	The plan provides processes for evacuating the entire facility (both horizontally and when applicable vertically) when the environment cannot support adequate care, treatment, and services.	B 0 1 2 NA

13.	The plan provides processes for establishing an alternative care site(s) that has the capabilities to meet the needs of patients when the environment cannot support adequate care, treatment, and services including processes for the following:
	    • Transporting patients, staff, and equipment to the alternative care site(s)
	    • Transferring to and from the alternative care site(s), the necessities of patients
	     (for example, medications, medical records)
	    • Tracking patients
	    • Inter-facility communication between the hospital and the alternative care site(s)
		B 0 1 2 NA

14.	The plan provides processes for identifying care provider and other personnel during emergencies.	B 0 1 2 NA

15.	The plan provides process for cooperative planning among health care organizations that together provide services to a contiguous geographic area (for example, among hospitals serving a town or borough) to facilitate the timely sharing of information about the following:
	    • Essential elements of their command structures and control centers for emergency response
	    • Names and roles of individuals in their command structures and command center telephone numbers
	    • Resources and assets that could potentially be shared in an emergency response
	    • Names of patients and deceased individuals brought to their hospitals to facilitate identifying and locating victims of the emergency
		B 0 1 2 NA

16.	Not applicable	B 0 1 2 NA
17.	Not applicable	B 0 1 2 NA
18.	The plan identifies backup internal and external communication systems in the event of failure during emergencies.	B 0 1 2 NA
19.	The plan identifies alternate roles and responsibilities of staff during emergencies, including to whom the report in the hospital's command structure and, when activated, in the community's command structure.	B 0 1 2 NA
20.	The plan identifies and alternative means of meeting essential building utility needs when the hospital is designated by the emergency management plan to provide continuous service during an emergency (for example, electricity, water, ventilation, fuel sources, medical gas/vacuum systems).	B 0 1 2 NA
21.	The plan identifies means for radioactive, biological and chemical isolation and decontamination.	B 0 1 2 NA

Appendix B

	Standard EC.4.20
	The Hospital conduct drills regularly to test emergency management.
		Scoring Grid
		0 Insufficient
		     compliance
		1 Partial
		compliance
		2 Satisfactory
		     compliance
		NA Not applicable

	Elements of Performance for EC.4.20.	
1.	The hospital tests the response phase of its emergency management plan twice a year, either in response to an actual emergency or in planned drills. (Drills that involve packages of information that simulate patents, their families, and the public are acceptable.) **Note 1:** Staff in each free standing building classified as a building of occupancy (as defined by the life safety codeR) that does not offer emergency services nor is community designated as a disaster-receiving station needs to participate in only one emergency preparedness drill annually. Staff in areas of the building that the hospital occupies must participate in this drill. **Note 2:** Tabletop exercises, though useful in planning or training, are acceptable substitutes only for communitywide disaster drills.	**A** 0 1 2 NA
2.	Drills are conducted at least four months apart and no more than eight months apart.	**A** 0 1 2 NA
3.	Hospitals that offer emergency services or are community-designated disaster receiving stations must conduct at least one drill a year that includes an influx of volunteers or simulated patients.	**A** 0 1 2 NA
4.	The hospital participates in at least one communitywide practice drill a year (where applicable) relevant to the priority emergencies identified in its hazard vulnerability analysis. The drill assesses the communication, coordination, and the effectiveness of the hospital's and community's command structures. **Note 1:** *"Communitywide" may range from a contiguous geographic area served by the same health care providers, to a large borough, town, city or region.* **Note 2:** *Tests of EPs 3 and 4 may be separate, simultaneous, or combined.*	**A** 0 1 2 NA
5.	Not applicable	
6.	All drills are critiqued to identify deficiencies and opportunities for improvement.	**B** 0 1 2 NA

Appendix C

DEPARTMENT OF THE ARMY
UNITED STATES ARMY MEDICAL DEPARTMENT ACTIVITY
FORT HOOD, TEXAS 76544-4752

THE DARNALL ARMY COMMUNITY HOSPITAL
EMERGENCY PREPAREDNESS TRAINING SURVEY

An Invitation to shape our future

Our mission is to provide the highest quality healthcare to our beneficiaries. In an effort to provide that quality care, it is necessary for Darnall to be prepared for both internal and external disasters. We maintain our preparedness through the development of a medical emergency management plan and educating our staff on their responsibilities to execute our plan whenever necessary.

You have been randomly selected to participate in an emergency preparedness training survey being conducted by CPT James Hayes, one of the Baylor Healthcare Administration Residents currently assigned to Darnall. Participation is voluntary and highly encouraged. All responses to the survey will be held in strictest confidence.

We need your assistance in striving to achieve Team Darnall's vision of creating a world class healthcare organization through training. Please take a few minutes to help us evaluate our team's current training trends and level of readiness. You may direct all questions to CPT Hayes at 288-8008, or by email at james.hayes@amedd.army.mil.

Thanks in advance for your support. Together we will continue to improve our ability to respond to our Nation's call - anytime, anyplace.

One Team!

Loree K. Sutton
Colonel, Medical Corps
Commanding

Appendix D

The purpose of this survey is to document employee training and readiness regarding the Medical Emergency Management Plan (MEMP) at Darnall Army Community Hospital. Specifically we are looking at training contact time, emphasis placed on training, methods of training, and overall knowledge as it relates to the MEMP. The data will help measure Darnall's staff level of preparedness and provide insight for future training.

There are no right or wrong answers, simply answer the questions honestly. Please read each question carefully and check one response per question. Your answers are confidential and all information gained in this study will only be presented in group data. Completion of this survey is voluntary. Do not sign your name to the survey.

1. What is your pay grade?

- O1 – O3
- O4 – O6
- E1 – E4
- E5 – E6
- E7 – E9
- GS1 – GS5
- GS6 – GS9
- GS10 – GS13>
- Wage Grade
- Contract Civilian
- Other

2. Which of the following classifications best describes your primary function?

- Attending/Staff Physician
- Resident Physician/Physician in Training
- Registered Nurse
- LVN/LPN
- Patient Care Assistant/Aide/Care partner
- Pharmacist
- Dietician
- Administrative Assistant/Clerk/Secretary
- Respiratory Therapist
- Physical, Occupational, or Speech Therapist
- Technician (e.g., EKG, Lab, Radiology, Pharmacy)
- Administration/Management
- Maintenance/housekeeping
- Volunteer
- Other

3. Do you know where to find a copy of the hospital's medical emergency management plan?

   - o Yes
   - o No

4. Have you read any portion of the hospital's medical emergency management plan?

   - o Yes
   - o No

5. Does your section have a separate, section specific, emergency management plan?

   - o Yes
   - o No
   - o Don't know

6. In your current position, do you have a specified role in the Hospital Emergency Incident Command System?

   - o Yes
   - o No
   - o Don't Know

7. Are emergency management skills and knowledge included in your current Competency Based Orientation (CBO) assessment?

   - o Yes
   - o No
   - o Don't Know

8. What degree of emphasis does your immediate supervisor place on the medical emergency management plan?

   - o None
   - o Low degree
   - o Moderate degree
   - o High degree

9. When new staff members are assigned to your section, how much emphasis is placed on teaching them their responsibilities as they relate to the MEMP?

    o None
    o Little emphasis
    o Moderate emphasis
    o Great emphasis
    o Don't know

10. When assigned to your current position were you counseled on your responsibilities as they relate to the hospitals MEMP?

    o Yes
    o No
    o Don't Know

11. In the last 12 months how much training have you received on emergency management/preparedness?

    o None
    o 0-2 hours
    o 2-4 hours
    o 4 or more hours

12. How long has it been since you last received training on the emergency management plan?

    o 0 – 30 days
    o 31 – 60 days
    o 61 – 90 days
    o 91 – 120 days
    o Greater than 120 days

13. Which statement(s) best describes the training you've received on emergency management? (check all that apply)

    o Power Point presentation and lecture
    o Online self-paced learning
    o Only what was provided at hospital orientation
    o Hospital orientation and section level orientation
    o Scheduled drills and exercises
    o Random occurrences that cause the facility to utilize its MEMP
    o Section/Staff meetings and discussions
    o Other

14. Which training mechanism(s) do you find the most beneficial for learning about emergency management? (check all that apply)

   o   Power Point presentation and lecture
   o   Online self paced learning
   o   Scheduled drills and exercises
   o   Random occurrences that cause the facility to utilize its MEMP
   o   Section/Staff meetings and discussions
   o   Reading articles
   o   Other

15. What type of training do you feel would be most beneficial to assist you with learning your responsibilities in the medical emergency management plan?

   o   Section level training/drills/exercises focusing on section responsibilities
   o   Computer based training
   o   Large group lectures
   o   Hospital size drills/exercises utilizing real people acting as patients
   o   Hospital size drills/exercises utilizing casualty cards as patients

16. Describe your training needs as they relate to your ability to perform your role in the event of an emergency?

   o   Don't need training
   o   Need a little training
   o   Need some training
   o   Need significant training
   o   Need training right now

17. Match the following codes with the correct topic the code is related to, use each letter only one time.

Color Code
___ Blue
___ Orange
___ Red
___ Yellow
___ Pink

Topic
A. Show of Force
B. Infant/Child abduction
C. Cardiac Arrest
D. Chemical
E. Fire
F. Bomb

Appendix E

TABLE 2
STANDING MEETINGS

MEETING	CHAIRPERSON	COPIES SENT TO:
Administrative Staff	Deputy Commander for Administration/Chief of Staff	QI Office
AMEDD Readiness, Education and Training	Commander	Human Resources
Blood Utilization/Tissue	Designated Surgeon	MSEC, Nurse Exec.
Civilian Resource Conservation Program	Deputy Commander for Administration/Chief of Staff	Human Resources
Emergency Preparedness Planning	DCCS	EOC; Executive Committee
Linen Management	Deputy Commander for Administration/Chief of Staff	EOC, Nurse Exec.
Medical Advisory (Look Back)	DCCS	MSEC
Rabies Control Advisory	Chief, Preventive Medicine	MSEC

Appendix F

Tab B-5

EMERGENCY PREPAREDNESS PLANNING MEETING

1. Membership is appointed as follows:

    a. Regular members

        Deputy Commander for Clinical Services (Chairperson)
        Deputy Commander for Administration/Chief of Staff
        Deputy Commander for Nursing
        Chief, Department of Emergency Medicine
        Executive Officer, DENTAC
        Chief, Personnel Division
        Chief, Clinical Operations Division
        Chief, Division of Readiness, Education, Training, and Security (Coordinator)
        Chief, Logistics Division
        Chief, Department of Pathology
        Public Affairs Officer
        Coordinator, DRETS (Recorder, without vote)

    b. Ad hoc members *

        Commander, Medical Company
        Safety Manager
        Representative, 3/507th Med Co (AA)
        Director, The Blood Bank Center
        Chief, Department of Surgery
        Chief, Operational and Deployment Medicine Branch
        Chief, Patient Administration Division
        Chief, Nutrition Care Division Commander, Medical Company
        Chief, Fort Hood Fire Protection Office
        Hospital Counsel
        Representative, G3 Mobilization Plans (AFZF-PTM-PZ)
        Representative, III Corps Surgeon's Office
        Representative, 1st Medical Brigade
        Representative, DMOC, 1st Cavalry Division
        Representative, DMOC, 4th Infantry Division
        Representative, III Corps Provost Marshal's Office
        Representative, Scott and White Hospital
        Representative, Copperas Cove Emergency Preparedness Office
        Representative, Copperas Cove Fire Department

Representative, Killeen Fire Department
Representative, Metroplex Hospital
Representative, Harker Heights Fire Department

Representative, Olin E. Teague VA Hospital
Representative, Facility Engineer
Representative, Texas Department of Public Health, Temple
Representative, Texas Department of Public Safety, Waco Disaster District
Representative, Killeen Emergency Management Office
Representative, Bell County Sheriff's Office
Representative, American Red Cross, Blue Bonnet Chapter
Representative, American Red Cross, DACH

*NOTE: As Requested

All other chiefs of hospital departments, divisions, branches, and services may be asked for input/coordination to the hospital internal and external disaster plan.

2.   Functions:

    a.   Prepare an Emergency Preparedness Plan that will enable the hospital to meet its responsibilities for emergency casualty care.

    b.   Develop exercise plans and evaluate the exercises.

    c.   Propose changes and improvements to the plan.

3.   Meeting frequency: Ad hoc.

4.   Minutes of this meeting are not required but issues/progress will be reported through the Environment of Care Committee.

5.   References: MEDCOM Reg 525-4, Emergency Preparedness.

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1. REPORT DATE (DD-MM-YYYY) 12-05-2006	2. REPORT TYPE Final Report	3. DATES COVERED (From - To) July 2005 - May 2006

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Emergency Preparedness: An Analysis of Staff Knowledge and Training at Darnall Army Community Hospital, Fort Hood, Texas	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S) James H. Hayes, CPT, MS	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Darnall Army Community Hospital 36000 Darnall Loop Fort Hood, Texas 76544-4752	8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) US Army Medical Department Center and School BLDG 2841 MCCS-HFB (Army-Baylor Program in Healthcare Administration) 3151 Scott Road, Suite 1411 Fort Sam Houston, Texas 78234-6135	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S) 15-06

12. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release; distribution is unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

Currently Army hospitals receive guidance and standards for the establishment and maintenance of an emergency management plan (EMP) from multiple entities, including the United States Army Medical Command (MEDCOM), the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and the National Fire Protection Agency (NFPA). These organizations require the establishment of an EMP, yet mechanisms to measure its effectiveness are not provided. JCAHO accreditation is often sited as an indicator of effectiveness, yet it is merely an indicator of compliance with performance measures. Compliance does not tell the hospital or its stakeholders whether or not the staff is adequately trained on the emergency management plans and if they can effectively execute the plan as written. Survey results show that approximately 90 percent of the staff indicated they were in need of additional training and almost 50 percent indicated the most beneficial training would be section level training/drills/exercises that focused on individual section specific responsibilities.

15. SUBJECT TERMS

Hospital Emergency Preparedness; Staff training needs assessment for emergency preparedness

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			PERSON Education Technician
U	U	U	UU	54	19b. TELEPHONE NUMBER (Include area code) (210) 221-6443